

Section II
Foliage & Seed-Feeding & Mining Insects

MONITORING TECHNIQUES FOR MANAGEMENT
OF COLORADO POTATO BEETLE

G. Xu and G. E. Long
Department of Entomology
Washington State University
Pullman, WA 99164-6382
509/335-5504

The monitoring of insect pests is an essential requirement for IPM. Various monitoring and sampling techniques were employed for our research on Colorado potato beetle. These following techniques turned out very useful and successful. Yellow pan traps, commonly used to monitor aphid flight, were effective in monitoring the initial activity of the beetle in spring, as well as the seasonal trend of adult densities. The beating tray method with a 68 cm square black sheet was easy and helpful for surveying population densities of the pest. The mark-recapture technique, with uniquely marked beetles, provided a good method to track the migration and dispersal of the beetle. Pitfall traps were helpful to monitor local movement, and to determine if adults moved by walking. Potato and nightshade sentinel plants were especially useful to evaluate host plant preference by the first generation adults and to monitor the seasonal trend of adult densities.

We concluded that the techniques used are practical for the management of the Colorado potato beetles. Application of these techniques is helpful in evaluating pest problems and in making management decisions, and consequently, increase the success of the pest management program.